

Real Estate eNews

Green Roofs

In the near future, it is possible you'll take a prospective home buyer to a home with a living, green roof. Living, or green, roofs have become increasingly popular in the United States in the last two decades.



The concept can be traced back hundreds of years to sod roofs found in Northern Scandinavian countries. These roofs were prized for their insulating properties and are still installed today.

Over the last fifty years, green roofs experienced resurgence in Germany, and their popularity spread across the European continent. The concept eventually made its way to the United States, and urban and country buildings are now sporting living roofs, with more and more businesses advertising the installation and maintenance of green roofs.

Some examples of large-scale living roof projects are Chicago's City Hall building as well as the Ford Motor Company's 454,000 square feet living roof in Dearborn, Michigan. The Ford roof is considered one of the largest, if not the largest, living roof in the world, turning the manufacturing facility roof into a 10.4-acre garden.



But improved technology has made these roofs easy to install for the average homeowner. The profusion of maintenance-free plants to choose from, as well as the benefits of a living roof, has made these roofs more practical and more popular.

There are different categories of green roofs, although any example includes vegetation, a growing medium (soil or other foundation) and a waterproof membrane to allow excess water to run off the roof.

"Intensive roofs" can support a wider variety of plants, even including shrubs and small trees. These roofs are heavier and require more maintenance, and are more frequently found on top of multiple-story buildings. "Extensive roofs" are covered in lighter layers of vegetation and are not as heavy as an intensive green roof. In addition, extensive roofs are typically self-sustaining and require minimal maintenance. The roof might need to be weeded, but the chore would most likely occur only once or twice a year. "Extensive" roofs need very little soil and can support sedum and mosses.

Issues to consider for those contemplating a living roof include the slope of the roof as well as the weight of soil and plants. A heavily pitched roof can lead to soil clumping, as well as pools of water collecting in certain areas of the roof. A pitch of 1/12 is considered ideal (1 inch of rise over 12 inches of run). Roofs with pitches greater than 7/12 or 30 degrees do not function well.



Flat roofs may also not provide the ideal surface for a green roof because of drainage problems. Once a roof design is chosen, it's important to check with an architect to make sure that the structure of the roof will support the extra weight of the green roof that is to be established. The weight of a roof with a thin layer of soil and sedum is approximately the same as a roof of clay tiles.

There are up-front costs to establishing a living roof, but savings will offset the costs in the long term. Due to all the hard paved surfaces and traditional roofs, cities are retaining heat and maintaining temperatures 10 degrees higher than the surrounding area. In the summer heat, the temperature on green roofs can be 20-60 degrees cooler than conventional roofing. The same insulating factor that decreases temperature in the summer also helps a building retain heat in the winter.



In addition, a living roof reduces ultraviolet exposure, leading to extended life for the roof. Some estimates suggest a living roof can last from 20 to 40 years.

Living roofs have environmental benefits ranging from the trapping of dust particles, to preventing pollutants from entering the water system. Living roofs reduce storm water run-off, which can prevent flooding and limit the overflow of sewage into lakes and streams. Even noise pollution can be ameliorated with a living roof, because the insulating property of plants and vegetation on the roof greatly reduces the sounds from traffic and air planes.

For any home buyer considering the purchase a home that features a green roof, the buyer should plan on having a professional home inspection and a secondary inspection of the roof with a structural engineer.